

AMENDMENTS TO THE DRAWINGS

Figures 1-3.

Attachment: Replacement Sheet(s)

REMARKS

Claims 8-18 are all the claims pending in the application. Claims 8-12 and 15-18 are rejected. Claim 11 is objected to but would be allowable if placed into independent form. Claims 13 and 14 are withdrawn from consideration. Applicants have amended claims 8 and 10-17. Claim 18 is cancelled and new claim 19 is added. The subject matter of claim 19 is found at page 5 in the description with regard to Fig. 3 of the original application (paragraph 27 of the published application).

As a preliminary matter, Applicant wishes to thank the Examiner for the courtesy extended to the undersigned representative in a personal interview conducted on March 27, 2008 during which the following matters were discussed. Applicant hopes that with these changes that overcome the indefiniteness rejections and the prior art rejections, the application has been placed into condition for allowance. If any matters remain outstanding, the Examiner is requested to contact the undersigned as soon as possible so that they may be resolved.

Drawings

The Examiner indicates that the amended drawings, as submitted on December 10, 2007 in response to the Examiner's objection in the previous Office Action, remain objectionable. In particular, the Examiner notes several added discrepancies.

First, the Examiner objects to the drawings because some of the reference characters in Figure 3 contain brackets. Further, the Examiner asserts for the first time that, since Figure 3 is a cross-section of Figure 2, reference characters "144" and "146" should not be in Figure 3 since these do not appear in Figure 1 or Figure 2. Finally, the Examiner notes that Figure 1 contains a "minor discrepancy which makes the slot 43 appear as ending too short from the cylindrical shoulder 38." The Examiner makes a suggestion, which Applicant adopts in the enclosed revised figures.

Applicant notes that these are new objections, not resulting from any change made by the Applicants in the previous submission. Applicants are again amending the figures with the hope that all possible bases for objection have been identified and resolved.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter as required by 37 CFR 1.75(d)(1) and MPEP § 608.01(o). The Examiner requires the addition of terminology corresponding to "an interior portion that is threaded," as recited in claim 16, line 9, and "a radially spreadable portion," as recited in claim 16, line 10.

The identified language does not appear in claim 16. However, it does appear in claim 18. Since the claim has been cancelled, the objection is moot.

Claim Objections

Claims 8, 10, 11, and 15-18 are objected to because of several specified informalities. Each of the identified instances of informality have been remedied by the present amendment to the claims. In particular, the Examiner's objection to the phrase "within narrow limits," a phrase that appears in the original specification at pages at pages 4, 6 and 7 with respect to the effect of the gap "a," as illustrated in Fig. 1 to show the axial distance by which the radially spreadable element 16 is moveable axially without rotation of the radially spreadable element. Applicant has removed the objectionable language from the claims and has employed the term "gap," as suggested by the Examiner.

Double Patenting

The Examiner asserts that, should claim 8 be found allowable, claim 17 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof, citing MPEP § 706.03(k). This rejection is traversed for at least the following reasons.

Claim 17 contains language not found in amended claim 8, including language that limits the interior element movement, namely "in that by rotating the inner tube with respect to the outer tube the interior element is moved away from the inner tube and into the radially spreadable element spreading it apart radially against the interior circumference of the outer tube." Applicant submits that there may be structures covered by amended claim 8 that are not covered by claim 17. Thus, the claims cannot be substantial duplicates. Under applicable law, there is no basis for a double patenting rejection and the rejection should be withdrawn.

Claim Rejections - 35 USC § 112

Claims 8-12 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. This rejection is traversed for at least the following reasons.

First, with regard to claim 18, the rejection is moot in view of the cancellation of the claim.

Second, with regard to claims 8, 10, 15, 16 and 17, the Examiner asserts that the recitation "narrow limits" in-claims 8, 10, 15, 16 and 17, line 13, is unclear as to where the limits are taken from. This basis for rejection has been removed by the present amendment to the claims, which specifies that "the distance between the limit stops is larger than the axial length of the radially spreadable element by a gap distance, such that the radially spreadable element is moveable axially within the distance between the limit stops, including the gap distance, without rotation thereof." This language clearly specifies that the radially spreadable element can move between the limit stops, specifically by a gap distance "a" as shown in the figures, without rotation, when there is axial force applied to the tubes. This movement by a gap distance spreads the radially spreadable element to better secure the tubes together.

Third, with further regard to claims 15 and 16, the Examiner asserts that the conditional limitation "or" in claim 15, line 20, and in claim 16, line 22, makes unclear how one radially protruding fin is able to be guided in several axial slots. This basis for rejection has been removed by the present amendment to the claims.

Claim Rejections - 35 USC § 102

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Simond, (5,458,427). This rejection is traversed for at least the following reasons.

The rejection is moot in view of the cancellation of claim 18. Nonetheless, Applicants wish to note that Simond differs totally from the present invention in that Simond does not meet the limitation in the claim that the spreading element has a single inner cone that (1) opens toward the end of the inner tube and (2) engages an outer cone on an interior element. The Examiner identifies component 10 and nut 35 in Fig. 11 as corresponding. However, there are two cones (39, 40) on the collar 10 and the cone 8 opening toward the end of the inner tube 2

does not interact with the conical surface 41 of nut 35. See, for example, the illustrations in Figs 6, 7 and 11. Thus, the structure in Simond is wholly inapplicable to the present invention.

Claim Rejections - 35 USC § 103

Claims 8-10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over newly cited Lindemann et al. (6,027,087), in view of a newly cited German language reference to Seifert (DE-1,046;998). This rejection is traversed for at least the following reasons.

Lindemann et al

Regarding independent claims 8 and 17, the Examiner refers to Fig. 1 of Lindemann et al. for the disclosure of an outer tube 11, an inner tube 12, an adjusting screw 32A, a spreading element 32, and an axially moveable interior element 31. The inner tube 12 is dimensioned for insertion into the outer tube 11 in a telescoping fashion. The Examiner assert that the spreading element 32 is radially spreadable, has a non-threaded bore A1 (in the Examiner's marked-up attachment) and only a single inner cone 46 that opens towards the end of the inner tube 12. The Examiner also points to interior element 31 as having an outer cone 34 for cooperation with the inner cone 46 and having an internal threaded bore 36 cooperating with the adjusting screw 32A.

The Examiner admits that Lindemann et al. fails to disclose an inner limit stop being disposed at the end of the inner tube 12, and the spreading element 32 being disposed between the limit stop 14, disposed at the end of the inner tube 12, and the limit stop 25 disposed on the free end. of the adjusting screw 32A.

In view of the Examiner's admission and upon review of Lindemann et al, one skilled in the art would understand that there are three essential features which cannot be found in Lindemann et al, namely:

1. the alleged "adjusting screw" 32A is not (a) non-rotatable with respect to the inner tube and (b) supported in a fixed manner on the end of the inner tube 12, as claimed;
2. the alleged "interior element" 31 is not axially moveable under rotation thereof with respect to the inner tube 12 via an internal threaded bore 36 screwed onto the adjusting screw 32A, as claimed; and

3. the alleged “radially spreadable element” 40 is not disposed with its axial length between a limit stop disposed at the end of the inner tube 12 and a limit stop disposed on the free end of the adjusting screw 32A, and wherein the distance between the two limit stops is larger than the axial length of the radially spreadable element 40 by a gap distance, such that the radially spreadable element 40 is movable axially within the distance between the limit stops, including a gap distance, without rotation thereof.

Feature 1.

Figures 2 and 7 of Lindemann et al clearly show that the screw 32A is axially moveable with respect to the head 31 and the tube 12 upon rotation thereof, due to the interaction of the screw threads and the inner threads in the bore 36 of the head 31.

Feature 2.

Figures 2 and 7 also show that the truncated conical expander head 31 (the Examiner’s “interior element”) is fixed within the inner tube 12 (see col. 3, lines 39-44) and is not “axially moveable.”

Feature 3.

Figure 7 clearly shows that the frictional brake member 40 (the Examiner’s “radially spreadable element”) is coupled to the top of screw 32A and its cap 42 extends beyond the top of screw 32A and has no limit stop. Thus, the distance between axial stops cannot be larger than the axial length of the frictional brake member 40, as claimed. Further, there is no gap distance defined by that difference in length, as claimed. Finally, there is no movement of the frictional brake member 40 without rotation thereof by a distance (disclosed as “narrow limits”) defined by such gap, as claimed.

In sum, the structure and operation of the device and components in Lindemann et al is completely different from that of the present invention, as now claimed. The Examiner admits to the absence of Feature 3, and looks to Seifert for appropriate teachings. However, that reliance is inadequate, as subsequently demonstrated.

Seifert

The Examiner asserts that Seifert teaches, in Figure 2, a limit stop 18 disposed at the end of an inner tube 12 to prevent an axially moveable interior member 17 from coming out of the inner tube 12. The Examiner makes two unsupported assertions. First, the Examiner concludes

that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a limit stop at the end of the inner tube of Lindemann et al. to prevent the interior member 31 from coming out of the inner tube. Second, the Examiner asserts that the spreading element 32 would have been disposed between the limit stop 18, as added to Lindemann et al. at the end of the inner tube 12, and the limit stop A2 disposed on the free end of the adjusting screw 32A.

The Examiner does not provide any translation of Seifert. Applicants have obtained a translation of the most relevant text portion describing figure 2 of Seifert, which should allow the Examiner to fully understand the structure disclosed in the reference. The text is reproduced below:

The relative fixation of the elements 11 and 12 is provided as given in the embodiment as illustrated in figures 2-4 by means of two clamping jaws 14, which via conical surfaces 15 are movable on a conical protrusion 16 which is formed at the end of a plug 17 which plug is fixed in the inner tube 12 by means of screw 18. A threaded peg 19 is rotatably mounted in the plug 16, 17, and the threaded peg 19 is secured against screwing out by means of a disc, for example a plate, bolting or the like. At the other end of the threaded peg 19 there is provided a plate like head 20, which on a cylindrical protrusion 21 carries a ring 22 which is angular in cross-section. Between the plate like head 20 and the ring 22, as can be seen in figure 3, a supporting ring 23 is located, between the two opposing ends 24 of which the free end of a screw 25 is located, which at the same time positions the ring 22 on the protrusion 21. The ring 23 is formed such that it presses against the inner wall of the outer tube 11 with an elastic pretension.

The relative fixation of the two tubes 11 and 12 is achieved by a relative rotation thereof. Since then, by means of the ring 23 and the screw 25, the threaded peg 19 is rotationally fixed within the outer tube 11, the conical protrusion protrudes between the clamping jaws 14 and presses them apart. The clamping can be released by un-screwing, since also then the threaded peg 19 is rotationally fixed in the outer tube 11. For a sealing and for increasing the relative guidance at the lower end of the plug there is preferentially provided a felt ring 26 which is soaked with lubricant. Above this there could in addition be provided a plate limiting the motion of the jaws 14.

When looking at the foregoing translation and the illustration in Fig. 2, one notes that there are there again are three essential features which cannot be found in Seifert, namely

1. the alleged “adjusting screw” 19 is not supported in a rotationally fixed manner on the end of the inner tube 12, as claimed;

2. the alleged “interior element” 17 is a plug that not (a) screwed onto the adjusting screw 19 and (b) axially moveable with respect to the inner tube by rotation thereof via the internal threaded bore, as claimed; and

3. the alleged “radially spreadable element” are jaws 14 that are is not disposed with its axial length between a limit stop disposed at the end of the inner tube 12 and a limit stop 18 disposed on the free end of the adjusting screw 19, and wherein the distance between the two limit stops is larger than the axial length of the radially spreadable element 14 by a gap distance, such that the radially spreadable element 14 is movable axially within the distance between the limit stops, including a gap distance, without rotation thereof.

Feature 1.

Figure 2 of Seifert and the foregoing text clearly show that the threaded peg 19 is axially moveable with respect to the plug 17 and the tube 12 upon rotation thereof, due to the interaction of the screw threads and the inner threads in the bore of the plug 17.

Feature 2.

Figure 2 also show that the plug 17 (the Examiner’s “interior element”) is fixed within the inner tube 12 (see above) and is not “axially moveable.”

Feature 3.

Figure 2 clearly shows that the clamping jaws 14 (the Examiner’s “radially spreadable element”) are coupled to a head 20 at the bottom of peg 19. The distance between the bottom head 20 and the top disk (unnumbered) is much greater than (twice in the illustration) and not just “larger” by a gap distance than the axial length of the jaws 14. Further, there is no gap distance defined by that difference in length, as claimed. Finally, there is no movement of the jaws 14 between limit stops, including a gap distance, without rotation thereof.

In sum, the structure and operation of the device and components in Seifert is completely different from that of the present invention, as now claimed.

In the absence of these three expressly recited limitations, individually or in combination, and in view of a totally different structure and operation, the combination of the two references cannot render the claimed invention unpatentable as the expressly claimed features are not taught or suggested in the references.

Other Prior Art

Given the difference between the claimed invention and the Seifert and Lindemann et al references, the Examiner cannot remedy these deficiencies by relying on Kupski or DSI.

The general idea of Lindemann and Seifert is to have a threaded adjusting screw which is not rotationally fixed with respect to the inner tube but which is rotationally fixed with respect to the spreading element. The screw is axially moveable and travels in a threaded bore of the fixed interior element. A combination of either or both references with Kupski and/or DSI would not be contemplated by the person skilled in the art, as those references have different structures and manners of operation, as previously explained in an Amendment filed November 26, 2007 and December 10, 2007.

Furthermore it should be noted that if one were to transfer the teaching of Lindemann or Seifert to, for example DSI, this would imply that the spreading element 10 of DSI would have to be rotationally fixed with respect to the screw 5, however due to the damping mechanism the system would then not work as the inner cone 9 could then either not move anymore with respect to the spreading element 10, or, if the inner element 9 would be allowed to rotate on the screw, the rotation of the inner element 9 concomitant with the rotation of the spreading element could not be prevented when trying to fix the mechanism.

In any case, the combination of these references would not lead to the combination of features according to any of independent claims 8, 10, 17 and 19, each of which has the three limitations recited in this analysis. In short, none of the four references presently or previously cited against the claims teach an inner cone with the claimed geometry of the cone, which during the clamping operation travels on a threaded screw which is rotationally fixed with respect to the inner tube. Further, none has the teaching of a gap, as claimed.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindemann et al., 6,027,087, in view of Seifert, DE-1,046,998, and Kupski, 3,145,669. This rejection is traversed for at least the following reasons.

Claims 15 and 16 contain the three distinguishing limitations previously identified as missing from Lindemann et al and Seifert. The Examiner also admits that these two references

do not teach the interior element having a protruding fin guided in an axial slot of the spreading element, as set forth in claims 15 and 16. The Examiner looks to Kupski for this deficiency.

First, as already demonstrated, none of the four previously cited references, including Kupski, teach the claimed invention, especially the three distinguishing features recited in all of the independent claims.

Second, Kupski teaches the use of recesses 30 and bosses 33 to prevent rotation. However, the bosses 33 are not “fins” and are not guided in “axial slots,” as claimed. While bosses and recesses may prevent rotation, the bosses are not “guided for axial movement,” as now claimed.

Allowable Subject Matter

The Examiner indicates that claim 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Applicants greatly appreciate the Examiner’s indication of allowability. However, for the reasons given, Applicants respectfully submit that all of the remaining claims, including new independent claim 19, would be patentable because of the failure of the prior art to teach three basic features of the claimed invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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